



ENVIRONMENTAL PROTECTION AGENCY

6560-50-P

[EPA-HQ-OAR-2019-0634; FRL-10002-58-OAR]

Proposed Baseline Approval of the Remote-Handled Transuranic Waste Characterization Program Implemented at the Department of Energy's Sandia National Laboratories

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of availability; opening of a 45-day public comment period.

SUMMARY: The EPA is proposing to approve SNL's remote-handled transuranic waste characterization program based on the inspections conducted on June 24–25, 2014, and the offsite document review conducted April–July 2019. Until the Agency finalizes its baseline approval decision, the Carlsbad Field Office may not recertify SNL's waste characterization program and the site may not ship transuranic waste to the WIPP for disposal.

DATES: Comments must be received on or before [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-HQ-OAR-2019-0634, to the *Federal eRulemaking Portal*: <http://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or withdrawn. The EPA may publish any comment received to its public docket. Do not electronically submit any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (i.e., on the web, cloud or other file sharing system). For additional

submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit:

<http://www2.epa.gov/dockets/commenting-epa-dockets>.

FOR FURTHER INFORMATION CONTACT: Edward Felts (202-343-9422) or Jerry Ellis (202-564-2766), Radiation Protection Division, Center for Waste Management and Regulations, Mail Code 6608T, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, Washington, DC, 20460; fax number: 202-343-2305; e-mail addresses: felts.ed@epa.gov or ellis.jerry@epa.gov.

SUPPLEMENTARY INFORMATION:

I. General Information

What Should I Consider as I Prepare My Comments for EPA?

Submitting CBI. Do not submit this information to the EPA through www.regulations.gov or e-mail. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD ROM that you mail to the EPA, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

Tips for Preparing Your Comments. When submitting comments, remember to:

- Identify the rulemaking by docket number and other identifying information (subject heading, Federal Register date and page number).
- Follow directions: The Agency may ask you to respond to specific questions or

organize comments by referencing a Code of Federal Regulations (CFR) part or section number.

- Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns, and suggest alternatives.
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- Make sure to submit your comments by the comment period deadline identified.

II. Background

The Environmental Protection Agency (EPA or the Agency) is announcing the availability of, and soliciting public comment on, this proposed action. Initially, the EPA approved the Sandia National Laboratories' (SNL) remote-handled transuranic waste characterization program in November 2011 for a limited duration, allowing the site to ship waste to the Waste Isolation Pilot Plant (WIPP) for disposal (EPA Docket No. A-98-49; II-A4-155). In May 2014, the Department of Energy's Carlsbad Field Office informed the EPA that SNL had identified additional remote-handled transuranic debris waste requiring a new baseline inspection in accordance with 40 CFR 194.8. The EPA conducted this second baseline inspection in two phases. During the first phase, the EPA observed waste characterization activities while onsite at SNL in Albuquerque, New Mexico, and concurrently interviewed cognizant personnel offsite in Denver, Colorado, on June 24–25, 2014. In the second phase of the baseline inspection, the Agency reviewed waste characterization records offsite from April–July 2019 in Washington, D.C. The EPA's report documenting the inspection results and proposed baseline approval is available for review in the public dockets listed in the **ADDRESSES** section of this document.

The DOE operates the WIPP facility near Carlsbad in southeastern New Mexico as a deep geologic repository for disposal of defense-related transuranic (TRU) radioactive waste. TRU waste contains more than 100 nanocuries of alpha-emitting TRU isotopes, with half-lives greater than twenty years, per gram of waste. Much of the existing TRU waste, which may also be contaminated with hazardous chemicals, consists of items contaminated during the production of nuclear weapons, such as debris waste (rags, equipment, tools) and solid waste (sludges, soil).

Section 8(d)(2) of the WIPP Land Withdrawal Act (LWA) of 1992 provided that the EPA would certify whether the WIPP facility will comply with the Agency's final disposal regulations, later codified at 40 CFR part 191, subparts B and C. On May 13, 1998, the Agency

announced its final compliance certification to the Secretary of Energy (published May 18, 1998; 63 FR 27354), certifying that the WIPP will comply with the disposal regulations. The EPA's certification of the WIPP was subject to various conditions, including conditions concerning quality assurance and waste characterization relating to EPA inspections, evaluations and approvals of the site-specific TRU waste characterization programs to ensure compliance with various EPA regulatory requirements, including those at 40 CFR 194.8, 194.22(a)(2)(i), 194.22(c)(4), 194.24(c)(3) and 194.24(c)(5). In addition, under the LWA, the initial WIPP certification was subject to quinquennial (every five years) recertification by the Agency.

The EPA's inspection and approval processes for waste generator sites, including quality assurance and waste characterization programs, are described at 40 CFR 194.8. Between November 2005 and April 2012, the EPA inspected waste characterization programs of previously approved sites. The Agency has discretion in establishing technical priorities; the ability to accommodate variation in the site's waste characterization capabilities; and flexibility in scheduling site waste characterization inspections.

In accordance with the conditions in the WIPP compliance certification and relevant regulatory provisions, including 40 CFR 194.8, the EPA conducts "baseline" inspections at waste generator sites, as well as subsequent inspections to confirm continued compliance. As part of a baseline inspection, the EPA evaluates each waste characterization process component (equipment, procedures and personnel training and experience) for adequacy and appropriateness in characterizing TRU waste intended for disposal at the WIPP. During the inspection, the site demonstrates its capabilities to characterize TRU waste(s) and its ability to comply with the regulatory limits and tracking requirements under §194.24. The baseline inspection can result in approval with limitations and conditions or may require follow-up inspection(s) before approval.

Within the approval documentation, the EPA specifies what subsequent program changes should be reported to the Agency, referred to as Tier 1 or Tier 2 changes, depending largely on the anticipated effect of the changes on data quality.

A Tier 1 designation requires that the CBFO provide to the EPA documentation on proposed changes to the approved components of an individual site-specific waste characterization process (such as radioassay equipment) which the Agency must approve before the change can be implemented. Tier 2 designated changes are minor changes to the approved components of individual waste characterization processes (such as visual examination procedures) which must also be reported to the EPA, but the site may implement such changes without awaiting Agency approval. After receiving notification of Tier 1 changes, the EPA may choose to inspect the site to evaluate technical adequacy. The inspections conducted to evaluate Tier 1 or Tier 2 changes are under the authority of the EPA's WIPP compliance certification conditions and regulations, including 40 CFR 194.8 and 194.24(h). In addition to follow-up inspections, the EPA may opt to conduct continued compliance inspections at TRU waste sites with a baseline approval under the authority of the WIPP compliance certification regulations, including §194.24(h).

In accordance with 40 CFR 194.8, the EPA issues a Federal Register notice proposing a baseline compliance decision, docket the inspection report for public review, and seeks public comment on the proposed decision for a minimum period of 45 days. The report describes the waste characterization processes the EPA inspected at the site, as well as their compliance with 40 CFR 194.8 and 194.24 requirements.

Proposed Baseline Decision

This notice announces the EPA's proposed baseline approval of the remote-handled (RH)

TRU debris waste characterization program implemented by the Central Characterization Program (CCP) at the DOE's SNL, in Albuquerque, New Mexico. In accordance with Title 40, Part 194, of the Code of Federal Regulations [40 CFR 94.8(b)], the EPA conducted Baseline Inspection No. EPA-SNL-CCP-RH-06.14-8 of the CCP's waste characterization program for RH TRU debris waste at SNL. Upon the EPA's final approval, DOE can emplace SNL-CCP RH TRU debris waste in the WIPP. The EPA previously approved SNL-CCP's RH TRU waste characterization program in November 2011 (EPA Docket No. A-98-49; II-A4-155). At the time, DOE expected that SNL-CCP would not have an active RH TRU waste characterization program beyond fiscal year 2012. In March 2012, the EPA approved one Tier 1 (T1) change (EPA Docket No. A-98-49; II-A4-160, EPA Air e-Docket No: EPA-HQ-OAR-2001-0012-0306). In May 2014, the Carlsbad Field Office (CBFO) informed the EPA that SNL had identified additional RH TRU debris waste requiring a new baseline inspection in accordance with 40 CFR 194.8. The EPA is proposing to approve the SNL-CCP waste characterization program implemented to characterize RH TRU debris waste as documented in the report ("Proposed Approval: EPA Baseline Inspection of the Central Characterization Program Remote-Handled Transuranic Waste Characterization Program for the Sandia National Laboratories"; hereafter, "the report"). The baseline inspection addressed in this notice occurred over an extended period of time. The EPA conducted the second baseline inspection in two segments: 1) observing waste characterization activities Dose-to- Curie (DTC) and Visual Examination (VE) onsite at SNL in Albuquerque, New Mexico, and interviewing Acceptable Knowledge (AK) personnel offsite in Denver, Colorado, on June 24–25, 2014; and 2) a desktop review of waste characterization records in Washington, DC, from April-July 2019. The results of the baseline inspection documented in the report are a combination of the results of the 2014 DTC and VE observations at SNL, AK

personnel interviews in Denver and the 2019 desktop review of all waste characterization records.

This baseline inspection evaluated SNL-CCP's RH waste characterization program for technical adequacy and, when approved, SNL-CCP would be allowed to ship waste already characterized under that program and to use the program's components to characterize future RH waste in accordance with the conditions and limitations discussed in the report. SNL-CCP representatives stated that all SNL RH TRU waste has been characterized with completion of the activities described in the report. However, based on the EPA's experience with RH TRU waste characterization programs, this proposed approval provides for the characterization of additional RH TRU wastes, subject to the conditions described below. Specifically, the proposed approval includes:

- (1) The AK process for RH TRU debris waste generated in the SNL Hot Cell Facility during the removal and packaging of experimental material and decontamination operations in Building 6580 and added to Waste Stream SNL-HCF-S5400-RH. The proposed approval also includes process generated waste from cleanup of the Auxiliary Hot Cell Facility after repackaging containers from Waste Stream SNL-HCF-S5400-RH.
- (2) The radiological characterization process using DTC and scaling factors for assigning radionuclide values for Waste Stream SNL-HCF-S5400-RH that is documented in Appendix C of CCP-AK-SNL-501, Revision 6, and supported by the calculation packages referenced in the report.
- (3) The VE process to identify waste material parameters and the physical form of RH TRU debris waste.

CBFO currently presents the population of subject waste as 25 drums of RH TRU waste

whose characterization activities were completed in 2015, using the processes observed and reviewed by the EPA in 2014. However, the Agency understands that there are two waste drums from Waste Stream SNL-HCF-S5400-RH that lack a clear path forward for disposal as RH TRU waste. One drum has an external dose rate that prevents shipment in its current configuration and, it appears, would require repacking into several drums to be eligible for shipment. The second drum contains HEPA filters associated with Waste Stream SNL-HCF-S5400-RH and SNL-CCP is not sure at the time of this notice if it will assay as contact-handled or RH TRU.

If the wastes within one or both of the drums are part of this waste stream, they would be covered by this proposed baseline approval, provided they were characterized by the EPA-approved processes described in the report. The Agency is aware that processing these drums would require SNL-CCP to perform DTC and VE activities, at a minimum, which would be a T1 change, as stated in Table 1. To be clear, commencement of any RH TRU waste characterization activities by SNL-CCP from the date of the final baseline approval must be reported to and approved by the EPA, according to Table 1. All T1 changes must be submitted for approval before their implementation and will be evaluated by the EPA. Upon approval, the Agency will post the results of the evaluations through the EPA's general WIPP eDocket. SNL-CCP must submit Tier 2 (T2) changes that have been implemented four times a year at the end of each fiscal quarter.

The EPA's final approval decision regarding the SNL-CCP RH TRU waste characterization program will be conveyed to DOE separately by letter following the EPA's review of public comments responding to this notice. This information will be provided through the EPA's WIPP docket provided for this action at [regulations.gov](https://www.regulations.gov) (Docket No:

EPA-HQ-OAR-2019-0634), in accordance with 40 CFR 194.8(b)(3). A summary of all WIPP-related EPA inspection statuses can also be found on the EPA website at

<https://www.epa.gov/radiation/waste-isolation-pilot-plant-wipp-inspections>, and any interested party can get these and other WIPP updates via the Agency's WIPP-NEWS website (<https://www.epa.gov/radiation/wipp-news>). Individuals may also subscribe to the WIPP-NEWS e-mail listserv using the instructions on the website.

Table 1. Tiering of RH-TRU Waste Characterization Processes Implemented by SNL-CCP (Based on June 24–25, 2014, and April–July 2019 Baseline Inspection)

Process Elements	SNL-CCP RH Waste Characterization Process – Tier 1 (T1) Changes Requiring EPA Approval	SNL-CCP RH Waste Characterization Process – Reporting of Tier 2 (T2) Changes*
Acceptable Knowledge	Implementation of payload management for any waste stream	<p>Submission of a list of SNL-CCP RH AK Experts and Site Project Managers that performed work during the previous quarter</p> <p>Notification to the EPA upon availability of or modification to AKSRs and certification test plans (e.g., CCP-AK-SNL-500, CCP-AK-SNL-502)</p> <p>Notification to the EPA upon availability of or substantive modification** to:</p> <ul style="list-style-type: none"> • CCP-TP-005, Attachments 8 and 9, including associated memoranda (e.g., add-container memoranda) • Waste stream profile form • AK accuracy reports (annually, at a minimum) • Enhanced AK documents such as AK assessment, CCE and BOK memoranda (including addition of new figures or attachments) • Characterization procedures requiring CBFO approval

Process Elements	SNL-CCP RH Waste Characterization Process – Tier 1 (T1) Changes Requiring EPA Approval	SNL-CCP RH Waste Characterization Process – Reporting of Tier 2 (T2) Changes*
Radiological Characterization, including Dose-To-Curie	Any radiological characterization processes performed after approval of the 2019 Baseline Inspection Substantive modification** to EPA-approved radiological characterization reports (e.g., CCP-AK-SNL-501)	Submission of a list of SNL-CCP DTC operators, expert analysts and independent technical reviewers that performed work during the previous quarter Notification to the EPA upon availability of or non-substantive modification** to radiological characterization reports (e.g., CCP-AK-SNL-501) Notification to the EPA upon availability of or modification to characterization procedures requiring CBFO approval
Visual Examination	Any VE performed after approval of the 2019 Baseline Inspection	Submission of a list of SNL-CCP VE Operators, VE Experts and independent technical reviewers that performed work during the previous quarter Notification to the EPA upon availability of or modification to characterization procedures requiring CBFO approval
Real-Time Radiography	Any use of RTR	None

* SNL-CCP will report all T2 changes to the EPA every three months.

** “Substantive modification” refers to a change with the potential to affect SNL-CCP’s RH waste characterization processes or documentation of them, excluding changes that are solely related to the environment, safety and health; nuclear safety; or the Resource Conservation and Recovery Act; or that are editorial in nature or are required to address administrative concerns. The EPA may request copies of new references that DOE adds during a document revision.

III. Availability of the Baseline Inspection Report and Proposed Approval for Public

Comment

The EPA has placed the report discussing the results of the inspection of the RH TRU waste characterization program at the Sandia National Laboratory in the public docket as described in the **ADDRESSES** section of this document. In accordance with 40 CFR 194.8, the Agency is providing the public 45 days to comment on this and other documents and the EPA’s proposed decision to approve the SNL RH TRU waste characterization program. The Agency requests comments particularly concerning the Enhanced Acceptable Knowledge process, a major significant change made by the Sandia National Laboratory to its RH TRU waste characterization program as previously approved by the EPA in 2012. The Agency will accept public comment on this notice and supplemental information as described in Section I above. At

the end of the public comment period, the EPA will evaluate all relevant public comments and, as the Agency may deem appropriate and necessary, revise the report and proposed decision or take other appropriate action. If the EPA concludes that there are no unresolved issues after the public comment period, the Agency will issue an approval letter and the final report. The letter of approval will authorize the DOE to use the approved waste characterization processes to characterize RH TRU waste at SNL.

Information on the approval decision will be filed in the official public docket opened for this action on www.regulations.gov, Docket ID No. EPA-HQ-OAR-2019-0634 (as listed in the **ADDRESSES** section of this document).

Dated: November 14, 2019.

Jonathan D. Edwards,
Director, Office of Radiation and Indoor Air.
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